

# Scanning Multichannel Microwave Radiometer (SMMR) By Prabhakara Langley DAAC Data Set Document

# **Summary:**

The Prabhakara SMMR Atmospheric Liquid Water files were generated by Dr. Prabhakara Cuddapah at the Goddard Space Flight Center (GSFC) using SMMR Antenna Temperatures. A discussion of the SMMR Antenna Temperatures is available from the Langley Distributed Active Archive Center (DAAC).

This document supports two data sets by Prabhakara and they are:

- SMMR\_ALW\_PRABHAKARA
- SMMR\_IWV\_PRABHAKARA

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### 1. Data Set Overview:

**Data Set Identification:** 

SMMR\_ALW\_PRABHAKARA: Scanning Multichannel Microwave Radiometer (SMMR) Monthly

Mean Atmospheric Liquid Water (ALW) By Prabhakara

(SMMR\_ALW\_PRABHAKARA)

SMMR\_IWV\_PRABHAKARA: Scanning Multichannel Microwave Radiometer (SMMR) Monthly

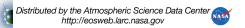
Mean Integrated WaterVapor (IWV) By Prabhakara

(SMMR\_IWV\_PRABHAKARA)

#### **Data Set Introduction:**

### SMMR\_ALW\_PRABHAKARA:

Each Atmospheric Liquid Water (ALW) file contains one month of 3 degree by 5 degree gridded mean liquid water. Each element of data is in units of mg/cm2. The data spans the period from February 1979 to May 1984.



#### SMMR\_IWV\_PRABHAKARA:

Each Integrated Water Vapor (IWV) file contains one month of 3 degree by 5 degree gridded mean water vapor. A scale factor of 0.1 must be applied to convert the data into units of g/cm2. The data spans the period from October 1979 to September 1983.

### **Objective/Purpose:**

### **Summary of Parameters:**

Liquid Water Content Water Vapor

Discussion:

**Related Data Sets:** 

# 2. Investigator(s):

Investigator(s) Name and Title:

**CUDDAPAH PRABHAKARA** 

### Title of Investigation:

### **Contact Information:**

#### **Investigator Information:**

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### **Technical Contact:**

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# 3. Theory of Measurements:

# 4. Equipment:

## **Sensor/Instrument Description:**

**Collection Environment:** 

Source/Platform:

NIMBUS-7

Source/Platform Mission Objectives:

**Key Variables:** 

**Principles of Operation:** 

**Sensor/Instrument Measurement Geometry:** 

Manufacturer of S	Sensor/I	nstrument:		
Sensor/Instrume	nt:			
SMMR				
Calibration:				
Specifications: Folerance:				
Frequency of Cal Other Calibration				
5. Data Acq	uisitio	n Methods:		
6. Observati	ions:			
Data Notes:				
Field Notes:				
7. Data Desc	criptio	on:		
Spatial Charac	cteristi	cs:		
Spatial Coverage	:			
Data Set	Min Lat	Max Lat	Min Lon	Max Lon
SMMR_ALW_PR ABHAKARA	-48.00	48.00	-180.00	180.00
SMMR_IWV_PR ABHAKARA	-75.00	75.00	-180.00	180.00
Spatial Coverage	-	thaga data gata		
Maps are not avail		inese data sets.		
Spatial Resolutio Projection:	n:			
Grid Description:	:			
Temporal Cha	racteri	stics:		
Temporal Covera	ige:			
Data Set		Begin Date	End Date	
	ABHAK 02-01-1979			
	ABHAK	02-01-1979	05-31-1984	

Temporal Coverage Map:

Maps are not available for these data sets.

**Temporal Resolution:** 

Data Characteristics:
Parameter/Variable:
Variable Description/Definition:
Unit of Measurement:
Data Source:
Data Range:
Sample Data Record:
8. Data Organization:
Data Granularity:
A general description of data granularity as it applies to the IMS appears in the EOSDIS Glossary.
Each data granule consists of one year of data.
Data Format:
The data are in native binary format.
9. Data Manipulations:
Formulae:
Derivation Techniques and Algorithms:
Data Processing Sequence:
Processing Steps:
Processing Changes:
Calculations:
Special Corrections/Adjustments:
Calculated Variables:
Graphs and Plots:
Images are not available for these data sets.
10. Errors:
Sources of Error:
Quality Assessment:
Data Validation by Source:
Confidence Level/Accuracy Judgement:
Measurement Error for Parameters:
Additional Quality Assessments:
Data Verification by Data Center:
11. Notes:
Limitations of the Data:
Known Problems with the Data:
Usage Guidance:

Any Other Relevant Information about the Study:

# 12. Application of the Data Set:

### 13. Future Modifications and Plans:

There are no plans for future modifications of these data sets.

#### 14. Software:

### **Software Description:**

Sample read software is not available for these data sets.

#### **Software Access:**

If you have any questions, please contact the Langley DAAC. Contact information is provided in this document.

### 15. Data Access:

#### **Contact Information:**

Langley DAAC User and Data Services Office NASA Langley Research Center Mail Stop 157D Hampton, Virginia 23681-2199 USA

Telephone: (757) 864-8656 FAX: (757) 864-8807

E-mail: support-asdc@earthdata.nasa.gov

#### **Data Center Identification:**

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E-mail: support-asdc@earthdata.nasa.gov

## **Procedures for Obtaining Data:**

The Langley DAAC Information Management System (IMS) is an on-line system that features a graphical user interface (GUI) that allows to query the Langley DAAC dataset holdings, to view pre-generated browse products, and to order specific data products.

The Langley DAAC User and Data Services staff provides technical and operational support for users ordering data.

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E-mail: <a href="mailto:support-asdc@earthdata.nasa.gov">support-asdc@earthdata.nasa.gov</a>

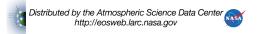
URL: http://eosweb.larc.nasa.gov

### **Data Center Status/Plans:**

The Langley DAAC will continue to archive this data. There are no plans to reprocess.

# 16. Output Products and Availability:

There are no output products for these data sets.



# 17. References:

Prabhakara, C., H. D. Chang, and T. C. Chang, 1982: Remote Sensing of Precipitable Water over the Oceans from Nimbus 7 Microwave Measurements. *J. Appl. Meteor.*, Vol. 21, No. 1, 59-68.

Prabhakara, C., G. Dalu, J. J. Nucciarone, and G. L. Liberti, 1992: Rainfall over Oceans: Remote Sensing from Satellite Microwave Radiometers. *Meteorol, Atmos. Phys.*, 47, 177-199.

# 18. Glossary of Terms:

**EOSDIS Glossary**.

# 19. List of Acronyms:

**EOSDIS Acronyms**.

NASA - National Aeronautics Space Administration URL - Uniform Resource Locator

# 20. Document Information:

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**Document ID:** 

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Citation:

**Document Curator:** 

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